ISSN 0821-0640

Land Use Classification in British Columbia

MOE Manual 8

Ministry of
Agriculture and Food

BC

Ministry of
Environment

86-06201/

Bc
E5
C
M636:8
1986
c.3

LAND USE CLASSIFICATION
IN
BRITISH COLUMBIA
(B.C.L.U.)

MOE MANUAL 8

by

Joan Sawicki
Gary Runka, P. Ag.

for

Ministry of Agriculture and Food
Soils Branch
and
Ministry of Environment
Surveys and Resource Mapping Branch

Victoria, British Columbia
April, 1986

Canadian Cataloguing in Publication Data

Sawicki, J. M.
Land use classification in British Columbia

(MOE manual, ISSN 0821-0640 ; 8)

Co-published by Surveys and Resource Mapping Branch.
Includes index.
Bibliography: p.
ISBN 0-7726-0480-0

1. Land use, Rural - British Columbia. I. Runka, G. G. (George Gary), 1938- . II. British Columbia. Soils Branch. III. British Columbia. Surveys and Resource Mapping Branch. IV. Title. V. Series.

HD319.B7S28 1986 333.73'13'09711 C86-092094-1

© Copyright 1986. B.C. Ministry of Environment
First Printing April 1986.

PREFACE

The accompanying report is a proposed present land use classifcation for British Columbia. It is intended for use by resource managers, land use planners and other professionals working in the rural settled area of the province.

This is a first edition of this publication. It has received technical input from various government agencies, including B.C. Ministries of Agriculture and Food, Environment, Lands Parks and Housing, Municipal Affairs, plus B.C. Assessment Authority, Agricultural Land Commission, Agriculture Canada and Environment Canada. However, it has not been field tested. With use, it is expected that some revisions may be necessary to enable the classification to meet the needs of potential users in the long term. Comments should be forwarded to R. Louie, Surveys and Resource Mapping Branch, Ministry of Enviornment, Parliament Buildings, B.C.

Grateful acknowledgement is extended to staff within the various government agencies who participated in the workshops on the BCLU classification. Special appreciation is extended to Ken Redpath and Anne Kerr of Lands Directorate, Environment Canada. Their extensive working knowledge of the CLUMP classification was particularly helpful in evolving a suitable provincial equivalent.

TABLE OF CONTENTS

	PAGE
PREFACE	iii
TABLE OF CONTENTS	v
CHAPTER 1. INTRODUCTION	1
CHAPTER 2. THE BCLU CLASSIFICATION	
2.1 Compatibility with Federal CLUMP Classification	3
2.2 Focus	5
2.3 Concepts	5
2.4 Land Use Coding	6
2.5 How to Use the Classification	7
2.6 Mapping Conventions	
CHAPTER 3. BCLU CLASSIFICATION USER KEY (Reference BCLU Classification back pocket)	14
REFERENCES	26
APPENDIX A: SUMMARY: BCLU CORRELATION WITH CLUMP CLASSIFICATION	27
APPENDIX B: SUMMARY: BCLU CORRELATION WITH CLI PLU CLASSIFICATION	30

1. INTRODUCTION

Land use issues are becoming increasingly important in British Columbia. As population expands, the demands made upon our land and water resources increase. With only a small percentage of our provincial land area "habitable", this also means more intense competition for space amongst various users. The complexity of land use patterns is accentuated in British Columbia by the high natural variability in topography, soils and climate.

While we are gaining the knowledge of other aspects of the land resource, including soils, vegetation and capability to support various uses, we do not yet have a good understanding of sequential land use patterns in British Columbia. Without a consistent approach to present land use inventory, we will be hampered not only in our understanding of past trends but also in our ability to predict and/or respond to future land use issues, opportunities and challenges.

Currently, land use data is collected by various federal, provincial, regional and local government agencies for various purposes. For the most part, classifications are independently derived and may or may not be used sequentially through time.

The closest approach to a standard provincial classification originated in the 1960's with the present land use sector of the Canada Land Inventory. Under this program, maps were produced at a scale of 1:50,000 for most of the rural settled areas of the province. In general, however, neither this data bank nor the classification has been widely used for planning purposes by agencies dealing with land use. Undoubtedly, part of the reason is that updating has generally received low priority since the original maps were produced. A more significant reason, however,

may be that the classification system itself is not regarded as discriminating enough to provide sufficient information to meet the needs of prospective users.

There appears to be a general consensus amongst land managers within the various resource agencies that British Columbia needs an updated, more comprehensive land use classification that can be consistently applied by a wide range of users for a variety of purposes.

2. THE BCLU CLASSIFICATION

2.1 Compatibility with Federal CLUMP Classification

In 1977, Lands Directorate, Environment Canada initiated a land use monitoring program for Canada. The stated goals were to monitor:

a) land use trends in relation to national goals and objectives;

b) the amount, location and type of land use change on a national, regional and provincial basis; and

c) land use change in specific problem and special areas such as floodplains and urban centered regions.[1]

Towards these ends, a new classification was derived and currently forms the working basis for CLUMP (Canada Land Use Monitoring Program) studies.

It is proposed that British Columbia adopt a modification of the national CLUMP classification for provincial use.[2] This recommendation is based upon a number of factors:

1. The national classification meets the two criteria established at the outset for a new provincial classification, namely:

   a) that it retain a degree of compatibility with the CLI PLU so as not to lose the substantial bank of knowledge available from current PLU maps[3]

   b) that it be computer compatible.

[1] Land Use Classification for Land Use Monitoring. 1981. Lands Directorate, Environment Canada Working Paper No. 17

[2] See Appendix A for correlation with CLUMP Classification

[3] See Appendix B for correlation with CLI PLU Classification

2. The stated goals and objectives of the national CLUMP classification accommodate the perceived goals of a provincial classification.

3. The remaining criteria upon which the CLUMP classification is based are regarded as important and relevant criteria for any provincial classification, namely:

   a) that the classification be hierarchical; that is, constructed with a number of levels that collapse to form fewer and fewer classes as one generalizes up the hierarchy.

   b) that separate land use variables (activity versus cover, land area-based versus site) should form separate components within the classification;

   c) that the classification be comprehensive to meet the needs of the majority of potential users; and

   d) that the system be independent of any particular data gathering method.

4. The CLUMP classification is the result of substantial research of other classification systems throughout North America.[1] While improvements and modifications are always possible with any classification system, it is unreasonable to suggest a more comprehensive or reliable alternate could be derived without a similar expenditure of time and effort. In addition, all else being equal, compatibility between a proposed provincial classification and an existing national classification is considered an important factor.

[1] Land Use Classification Systems: An Overview. 1981. Lands Directorate, Environment Canada. Working Paper No. 14

2.2 Focus

The focus of the proposed provincial classification is the rural settled area of the province, broadly defined as that area beyond the urban "core" where structures and pavement predominate but not extending into the "hinterland" where settlement activities are essentially not a landscape component.

2.3 Concepts

In addition to the criteria outlined above, there are four concepts that are basic to understanding and using the classification.

1. Land "use" is defined in terms of a specific combination of land activity and land cover.

2. Land "activity" is regarded as the active use man makes of the land. It is not to be confused with other variables, such as tenure, ownership, economic activity or land value.

3. Land "cover" is regarded as the vegetative, natural or artificial construction covering the land surface. It is not to be confused with activity, as the same "cover" may be used for different activities and a single activity may take place on a variety of "cover".

4. There is a distinction between activities that make use of land as a producing medium and those that use land essentially as a "site". In other words, those activities that rely upon the productive capabilities of the land are distinguished from those that do not depend upon productive capabilities of the land in order to take place.

2.4 Land Use Coding

The BCLU classification has been designed for data collection at approximately 1:20,000. It is envisioned that in most instances, initial interpretation will be carried out by remote sensing, followed by a variable intensity of ground checking. However, the classification is not restricted either to the scale at which it can be utilized or the method by which data is collected. Because the classification is hierarchical, it can be expanded into more detail or generalized to the desired level. For example:

A000 - indicates agricultural activity but
A100 - specifies productive-land agricultural activities, and
A110 - is growing annual tillage crops while
A111 - is growing grain

For each project or study area, it is important to establish at the outset the detail at which each major activity category is to be mapped. For example, it may be desirable to distinguish agricultural activities at the most detailed level ie: A111 (growing grain), whereas it may be sufficient to code manufacturing activities at the most generalized level ie: M000 (manufacturing and storage activities). Where the activity code is very specific, the cover code can often be kept fairly general. Conversely, use of a detailed cover code can add specific meaning to a more inclusive activity category.

A complete land use code will comprise one activity and one cover, at a chosen level of detail. While there is no technical reason why both activity and cover codes cannot be complexed - and the early CLUMP work did in fact do this --- it is not recommended.

For ease of data processing, handling and analysis, the recommendation is to limit the code to 8 digits, comprising a single activity and a single cover.

Whether coding is done directly on map polygons or on separate code sheets with corresponding polygon numbers, the code must at all times comprise 8 digits; 4 for activity and 4 for cover. Thus:

A121/V210 indicates cultivated forage activity/with improved grass cover

M000/Y000 indicates manufacturing and storage activity/ with constructed cover

2.5 How to Use the Classification

While the classification is a logical hierarchy, it takes time to become proficient in its use. In order to render the classification more "user-friendly", it is presented in two different formats:

1. The BCLU classification is presented in User Key format. The first part is listed alphabetically by activity class. In addition to examples of each activity category, the Key includes commonly associated cover codes and suggested classification conventions. The cover classification, including definitions and examples, forms the second part of the User Key.

2. A quick reference BCLU classification is provided in a back pocket to the manual. Once a degree of proficiency has been developed, the user will most likely rely primarily upon this quick reference guide, referring to the User Key only in instances of uncertainty as to how to classify a particular land use.

2.6 Mapping Conventions

For the most part, the evolution of mapping guidelines will need to await field testing of the classification. There are, however, "hard to handle" land use situations that warrant some agreement on approach at the outset. The following guidelines are suggested as a starting point. They should be regarded as preliminary, pending a broader consensus reached through field experience with the classification in various regions of the province.

1. Forestry Activities

Keeping in mind that the classification is intended primarily for use in the rural settled areas of the province, extensive forested areas should not often be encountered, except as edge polygons along study area boundaries. The difficulties in classifying forested areas stem from two factors:

a) the inability of the classification to reflect integrated use; that is, forestry/grazing/wildlife/recreation complexes, which is accentuated by the decision to limit codes to one activity and one cover.

b) the limited ability, using standard remote sensing techniques, to identify "forest management", particularly in areas inaccessible to ground checking.

Pending field testing of the classification and this guideline, the following approach is recommended for extensive tracts of forested land:

a) where grazing, recreation or wildlife activities are evident or known, delineate these as activity polygons;

b) where evidence of logging or forest management activity, use appropriate F100 code;

c) where land characteristics obviously preclude commercial forest use or where absolutely no activity is perceived, use N000 with appropriate cover.

2. Dwellings

Dwellings can occur in association with various other activities. The key to classifying is to recognize the reason for which the dwelling exists in this location. More specifically, it is sometimes helpful to ask the question - If the classification is "rolled up" to the highest level of generalization, what is the message? On this basis, accommodation at logging camps, military barracks or university dormitories more logically belong in the F and J categories than in the D category. Only those dwelling activities not existing for a specific purpose or not directly tied to a specific associated activity should be classified as D.

This includes cottaging (which may be used for any number of associated activities) but not hunting and fishing lodges, (which are operated solely for one purpose). On this basis also, although hotels and motels may be in locations frequented extensively by tourists, they should be classified in the Dwelling category.

3. Rural Residential Areas

One of the most difficult use patterns to handle within any land use classification is the "rural residential" or "hobby farm" pattern so common in many areas of British Columbia. In addition to varying dwelling density, land use is truly a complex mix within restricted areas of predominantly small parcel sizes. The key to using the BCLU classification in these situations is to clearly differentiate between the actual use being made of the land and the economic activity taking place within the legal parcel. The activity/cover classification can only attempt to deal with the former. Legal parcel or dwelling density overlays are recommended to deal with the latter.

The following guidelines have been derived to assist classification and mapping of "rural residential" areas. As field experience is gained, these guidelines may be refined.

a) where possible, delineate groups of single residences as a polygon - usually a linear unit along the road frontage - and classify as a dwelling activity with a buildings cover: (D110/Y110)

b) for adjacent mixed agricultural use areas too small to map as individual polygons, move to a more generalized level of both activity and cover to reflect this complexity, eg:

A000/V000 to indicate the widest range of agricultural activities including soil and non-soil based, with grasses and other non-woody plants as the dominant cover.

A100/V000 to indicate mixed but predominantly soil-based agricultural activities, with grassy and non-woody plant cover.

A200/Y000 to indicate mixed but predominantly "site" or non-soil based agricultural activities, with a constructed (buildings and surfaces) cover.

c) where dwellings are scattered residences in a landscape with other dominant uses and it is not possible to map a separate dwelling polygon, ignore the dwelling activity

d) if the residential use is the only use evident within a polygon, recognize a dwelling activity but code the appropriate vegetative cover, eg: D110/W110 (mature forested) or D110/V220 (unimproved grassland).

4. Line Data

Roads, railways, pipelines and electrical transmission lines present a unique problem in land use mapping. While it may not be practical or desirable to map these linear

uses everywhere they occur, at 1:20,000 scale they warrant recognition in certain instances; for example, four-lane highways or freeways and double-tracked railways. In the case of pipelines and transmission lines, where these uses take place under or over more intensive activities, such as agriculture, ignore the linear activity. In forested areas, however, where such linear activities are accompanied by a distinctive contrast in cover, code the linear activity but reflect the vegetative cover, eg: H150/V220 (pipeline/unimproved grass) or H160/V210 (transmission line/improved grass).

5. Point Data

In some instances, even at 1:20,000 scale, distinctive land uses may be too small to map, even as minimum-sized polygons. Where these are considered relevant, such as greenhouses, roadside fruit and vegetable stands or poultry buildings, they should be identified as point data and coded in the normal manner. Point data should not be used for those site activities that logically accompany - almost by definition - the adjacent land use, such as horse barns and paddocks scattered throughout an area of predominantly forage use activity. The point data option should be reserved for "unexpected" uses or for specific site activities whose presence within the land use pattern may have land use planning implications for surrounding lands.

6. Other Land Use Variables

It is recognized that no one classification can meet all needs of all potential users. The goal is to achieve an acceptable compromise. This proposed BCLU classification is deliberately focused to enable mapping of land "use"

within rural settled areas of the province. There are other land use variables essential to resource managers and land use planners that cannot be accommodated within the proposed classification, namely parcel size and land tenure. While these factors can directly influence land use, they are not "use" per se and thus, along with administrative boundaries and land capability, they are better considered as separate "overlays".

3. BCLU CLASSIFICATION USER KEY[1]

LAND ACTIVITY CLASSIFICATION

ACTIVITY CODE	DEFINITION/EXAMPLES	COMMONLY ASSOCIATED COVER/ CLASSIFICATION CONVENTIONS	
A000 AGRICULTURAL ACTIVITIES			
A100 Productive-Land Agricultural Activities	(activities that use land as the producing medium, ie: soil based)		
A110 Growing Annual Tillage Crops			
A111 Growing Grain	. but not forage or oil seeds (A114)	V120 (close grown)	. See CLUMP if cover breakdown to wheat, barley, etc. desirable
A112 Growing Vegetables	. but not root crops or tubers (A113)	V110 (row)	
A113 Growing Root Crops and Tubers		V110 (row)	
A114 Growing Seed Crops	. oil seeds but not grain (A111) or forage seeds (A180)	V120 (close grown)	
A116 Growing Flowers and Bulbs		V110 (row)	
A119 Other			
A120 Growing Forage Crops and Grazing			
A121 Growing Forage Crops	. cultivated forages harvested for hay, silage, etc.	V210 (improved grass)	. where native grasses are cut for hay, use V220 (unimprov. grass)
A122 Grazing	. pasture, range	V210 (improved grass) or V220 (unimproved grass)	
A130 Fruit, Berry and Nut Production			
A131 Tree Fruit Production	. orchards	W110 (spaced, tall trees) or W210 (spaced dwarf or immature)	
A132 Grape Production	. vineyards	W300 (vines)	
A133 Berry Production	. strawberries ..... V400 (other non-woody) . raspberries ..... W300 (vines) . blueberries ..... W212 (tall shrubs) . cranberries ..... W213 (low bushes)		. distinguish by cover convention
A134 Tree Fruit or Grape Nursery Stock Production		W210 (spaced, immature trees) or W300 (vines)	
A135 Nut Production		W110 (spaced, tall trees mature) or W210 (spaced immature trees)	
A140 Growing Ornamental Shrubs and Trees	. but not forest seedlings (F120)	W210 (spaced, immature trees or shrubs)	
A150 Sod Production	. turf	V210 (improved grass)	
A160 Agricultural Research	. experimental farms and research plots but not associated buildings (A290)		. cover dependent on type; use V000 if mixed rather than distinguishing polygons based on cover alone
A170 Hop Production		W300 (vines)	
A180 Specialty Perennial Crops	. asparagus, forage seeds, herbs	V400 (other non-woody plants) or V110 (row) or V120 (close grown)	
A190 Other	. includes fallow land where perceived for agricultural purposes but not land in rotation with annually tilled crops ie: seasonal (A110)	X220 (bare surface, man-made)	. dependent on activity

[1] Derived from Land Use Classification for Land Use Monitoring by D.M. Glerman, Lands Directorate, Environment Canada Working Paper No. 17, 1981

LAND ACTIVITY CLASSIFICATION (CONT'D)

ACTIVITY CODE	DEFINITION/EXAMPLES	COMMONLY ASSOCIATED COVER/ CLASSIFICATION CONVENTIONS
A200 Site Agricultural Activities	(activities that use land as a site and not a producing medium)	
A210 Housing Livestock	. buildings but not open shelters, paddocks or feedlots (A220) or equestrian centres (R214)	Y110 (buildings)
A211 Housing dairy animals		
A212 Housing beef animals		
A213 Housing horses		
A214 Housing swine		
A215 Housing sheep		
A219 Other		
A220 Outside Animal Feeding and Holding Areas	. feedlots, shipping corrals, paddocks . horse training facilities but not commercial race tracks or riding stables (R214)	Y120 (structures) or X200 (bare surface) or Y200 (constructed surface)
A221 Dairy		
A222 Beef		
A223 Horse		
A225 Sheep		
A229 Other	. waterfowl, pheasants, wild meat production	
A230 Housing Poultry, Game Birds and Fur Bearing Animals		Y110 (buildings)
A231 Housing Poultry	. broilers, egg producers turkeys	
A232 Housing Game Birds	. pigeons (squabs), quail partridge	
A233 Housing Fur Bearing Animals	. rabbits, mink	
A240 Growing Plants in Greenhouses	. but not forest tree seedlings (F200)	Y110 (buildings)
A241 Growing Vegetables		
A242 Growing Flowers & Ornamentals		
A249 Other		
A250 Storing Crops and Storing/ Repairing Agricultural Machinery and Tools	. fruit packing houses, hay barns and silos	Y110 (buildings) or Y120 (structures) or Y200 (constructed surface)
A251 Storing Crops		
A252 Storing and Repairing Agricultural Machinery and Tools		
A270 Mushroom Growing		Y110 (buildings)
A280 Beekeeping and Honey Making	. hives, extraction facilities but not processing (M220)	Y120 (structures) or Y110 (buildings)
A290 Other		

LAND ACTIVITY CLASSIFICATION (CONT'D)

ACTIVITY CODE		DEFINITION/EXAMPLES	COMMONLY ASSOCIATED COVER/ CLASSIFICATION CONVENTIONS	
B000	**UNUSED (IDLE) LAND**	(land on which activity is perceived to have taken place in the past but on which no activity is taking place at present, eg: derelict buildings, abandoned orchards)		
B100	Former Agricultural Activities			
B200	Former Forestry Activities			
B300	Former Extraction Activities			
B400	Former Recreational Activities			
B500	Former Dwelling Activities			
B600	Former Transportation and Communications Activities			
B700	Former Manufacturing and Storage Activities			
B800	Former Commercial Activities			
B900	Former Institutional Services			
C000	**COMMERCIAL ACTIVITIES**	(land on which activity is buying or selling merchandise or services)		
C100	Wholesaling	. distribution centers for food, petroleum, paper, lumber, dry goods, machinery and hardware products but not retail outlets (C200)	Y000 (constructed cover) or Y110 (buildings)	
C200	Retailing	. corner stores, shopping malls, food, hardware outlets, etc., retail car sales lots but not parking areas (H110)	Y000 (constructed cover) or Y110 (buildings)	. Use Y000 to indicate that polygon includes parking activity
C300	Providing Commercial Services	. financial, real estate, rental and repair and professional services	Y000 (constructed cover) or Y110 (buildings)	. Use Y000 to indicate that polygon includes parking activity
D000	**DWELLING ACTIVITIES**	(land where the primary activity is dwelling but not logging camps (F200), or extraction activity camps (E350), hunting lodges (R160), care homes (J400), university dormitories (J300) or military barracks (J200)).		
D100	Housekeeping Activities			
D110	Permanent Dwellings			
D111	Single Family Dwelling		Y110 (buildings)	
D112	Multiple Dwellings	. apartment blocks, condominiums	Y110 (buildings)	
D113	Mobile Homes		Y120 (non-building structures)	
D119	Other			
D120	Seasonal/Temporary Housekeeping	. pickers cabins, cottaging but not fishing or hunting lodges (R160) or campsites and tourist trailer parks (R216)	Y110 (buildings)	
D200	Other Dwelling Activity			
D210	Group Homes	. rooming houses, but not multiple dwellings (D112), care homes (J400) or dormitories (J300)	Y110 (buildings)	
D220	Hotels, Motels	. but not cottages (D120) or fishing or hunting lodges (R160)	Y110 (buildings)	
D230	Construction Camps	. but not those associated with forestry (F200) or extraction (E350) activities		
D290	Other			

LAND ACTIVITY CLASSIFICATION (CONT'D)

ACTIVITY CODE	DEFINITION/EXAMPLES	COMMONLY ASSOCIATED COVER/ CLASSIFICATION CONVENTIONS	
E000 EXTRACTION ACTIVITIES	(extraction, but not processing of non-renewable resources and underground water)		
E100 Surface Extraction			
E110 Extraction of Rock or Consolidated Material	. open pit mining of metals and coal and quarrying of stone and industrial minerals but not on-site handling (E330) or processing (M200)	X120 (rock surface, man-made)	
E120 Extraction of Sand, Gravel and Clay	. but not on site handling (E330) or processing (M200)	X220 (bare surface, man-made)	
E130 Peat Extraction		X220 (bare surface) or V300 (mosses) or W220 (shrubs)	. cover dependent on harvesting technique, time lapse, etc.
E140 Top Soil Removal		X220 (bare surface, man-made)	
E190 Other			
E200 Underground Extraction	. land under which extraction is taking place but not extraction site activities (E300)		. use sparingly
E300 Extraction Site Activities			
E310 Pumping	. gas, oil, water, well sites including equipment areas	Y100 (structures) or Y200 (constructed surface)	
E320 Transporting/Holding Wastes and Tailings	. tailings dams and ponds; rock waste dumps . settling ponds, placer mining tailings	Y120 (non-building struct.) or Y220 (unconsolid. surface) or Z300 (reservoir)	
E330 Handling Extracted Material	. moving, crushing, washing, sorting but not processing (M200)	Y100 (structures) or Y220 (unconsolid. surface)	
E340 Placer Mining	. but not tailings (E320)	Y100 (structures) or X220 (bare surface, man-made)	
E350 Extraction Activity Camp Facilities		Y110 (buildings)	
E390 Other			
E400 Exploration Activities	. seismic networks, exploration trenching	X220 (bare surface man-made) or V220 (grasses) or W120 (trees)	. use X220 to reflect dense network; otherwise use surrounding vegetation cover

LAND ACTIVITY CLASSIFICATION (CONT'D)

ACTIVITY CODE	DEFINITION/EXAMPLES	COMMONLY ASSOCIATED COVER/ CLASSIFICATION CONVENTIONS	
F000 FORESTRY ACTIVITIES			
F100 Productive Land Forestry Activities	(forestry activities that use land as a producing medium; excludes forested land used primarily for recreation (R100), domestic livestock grazing (A122) or wildlife habitat (G100))		
F110 Logging/Cutting Trees	. active logging areas but not previously logged areas that have regenerated (F170)	X200 (bare surface) or W120 (tall trees) or W220 (shrubs)	
F120 Gathering Tree Seed/ Raising Seedlings	. seed orchards and forest nurseries but not ornamental shrubs and tree nurseries (A140) or raising seedlings in greenhouses (F200)	W100 (trees) or W210 (spaced immature trees)	
F130 Forestry Research	. but not associated buildings (F200)		. use W000 if mixed mature/immature, regular/irregular spaced, coniferous/ deciduous
F150 Growing Christmas Trees		W210 (spaced small trees) or W220 (irreg. spaced small trees)	
F160 Holly Production		W210 (spaced small trees) or W110 (spaced tall trees)	
F170 Forest Management Activities	. thinning and fertilizing . planted or naturally regenerating forests but not areas merely with designated forest tenure	W100 (tall trees) or W110 (spaced tall trees) or W200 (immature trees) or W210 (spaced, immature trees)	. can be generalized to F100/W000 for convenience
F190 Other	. but not areas with no perceived forestry or other activity (N000)		. delineate by cover
F200 Site Forestry Activities	. equipment and cut tree storage, forest fire lookouts, logging camp facilities, raising seedlings in greenhouses	Y000 (constructed cover) or Y110 (buildings) or Y200 (constructed surface) or X200 (bare surface)	
G000 WILDLIFE AND FISHERIES RELATED ACTIVITIES			
G100 Productive-Land Wildlife Activities	. game sanctuaries, wildlife preservation/ management areas, traplines, but not land primarily used for forestry (F100), recreation (R100), or domestic livestock grazing (A122)	W100 (trees) or W200 (shrubs) or V220 (grasses, sedges)	. delineate by cover
G200 Wildlife and Fisheries - Related Site Activities			
G210 Land-Animal Site Activities	. breeding wildlife but not game farms (R210) or hunting camps (R216)	Y100 (structures) or V200 (grasses, sedges, forbes) or W220 (shrubs)	
G220 Fishing Site Activities			
G222 Raising fish for Transplant	. fish hatcheries	Y100 (structures)	
G223 Aiding Fish Migration	. runs and ladders, artificial spawning channels	Y120 (non-building structures) or Y220 (constructed surface)	
G225 Commercial Fishing Facilities	. wharfs and docks, boat storage, fish net storage and drying	Y000 (constructed cover)	
G229 Other			

LAND ACTIVITY CLASSIFICATION (CONT'D)

ACTIVITY CODE	DEFINITION/EXAMPLES	COMMONLY ASSOCIATED COVER/ CLASSIFICATION CONVENTIONS	
H000 TRANSPORTATION AND COMMUNICATION ACTIVITIES	(activity that is transferring goods, people or information from one place to another)		
H100 Transporting Activities			
H110 Transporting by Roads	. freeways, highway interchanges, highway maintenance yards . bus terminals, parking lots but not vehicle storage (M520)	Y000 (constructed cover) or Y200 (constructed surface) or Y210 (hard surface)	. for freeways assume constructed road surface not grassed median
H120 Transporting by Rail	. railways, switching yards, terminals, stations, maintenance yards	Y000 (constructed cover) or Y200 (constructed surface) or Y110 (buildings)	
H130 Transporting by Air	. runways, terminals, maintenance facilities, helicopter pads, but not aircraft storage (M520)	Y110 (buildings) or Y210 (hard surface) or V210 (improved grass)	. use V210 for grassed airstrips and grassed areas enclosed by and immediately adjacent to hard surface runways
H140 Transporting by Water	. ferry terminals (but not parking areas (H110) . lighthouses, docks and wharfs but not commercial fishing wharfs (G227) or recreational boat launches (R150)	Y100 (structures) or Y120 (non-building structures)	
H150 Transporting by Pipeline	. gas, oil, water, sewage but not extraction by pumping (E310) treatment/disposal of waste (M610) or pumping water for drainage or flood control (P200)	V220 (grass)	. use dominant cover
H160 Transporting by Electricity	. transmission lines and towers, switching and sub stations	Y100 (structures) or V220 (grass)	. use dominant cover
H190 Other			
H200 Communicating Activity	. microwave towers, radio and television stations . telephone stations	Y100 (structures) or Y110 (buildings) or W220 (shrubs)	

LAND ACTIVITY CLASSIFICATION (CONT'D)

ACTIVITY CODE		DEFINITION/EXAMPLES	COMMONLY ASSOCIATED COVER/ CLASSIFICATION CONVENTIONS	
J000	PROVIDING INSTITUTIONAL SERVICES	(including service provided by government agencies or private institutions)		
J100	Legislative, Judicial and Legal Services	. courthouses, municipal, regional district, provincial and federal government offices	Y110 (buildings)	
J200	Protective and Custodial	. prisons, police stations, fire halls . national defense, military barracks	Y110 (buildings) or X200 (bare surface) or Y200 (constructed surface) or V200 (grass)	. delineate prison grounds and outdoor national defense activities on basis of cover
J300	Educational Services	. schools, colleges, universities but not parking areas (H110)	Y000 (constructed cover) or Y110 (buildings) or V210 (improved grass)	. use Y000 to indicate that polygon includes significant hard surface playground and/or parking activity . use V210 for school playgrounds
J400	Health, Medical and Care Facilities	. hospitals, medical clinics, physically/mentally handicapped homes but not senior citizens homes (D210)	Y000 (constructed cover) or Y110 (buildings) or V210 (improved grass)	. use Y000 to indicate polygon includes parking activity . use V210 for landscaped grounds
J600	Religious and Associated Activities			
J610	Worshipping	. churches	Y110 (buildings)	
J620	Burying	. cemeteries	V210 (improved grass) or Y200 (constructed surface)	
J700	Assembly Activities	. community halls, convention centers but not parking areas (H110)	Y000 (constructed cover) or Y110 (buildings)	
J900	Undifferentiated Institutional Services			
L000	LAND IN TRANSITION	(land on which there is evidence that at some near future data, there may be a change in land use activity, ie: the land cover or surface is actively disturbed in such a manner as to indicate a changing activity, eg: subdivision road network.)		

LAND ACTIVITY CLASSIFICATION (CONT'D)

ACTIVITY CODE		DEFINITION/EXAMPLES	COMMONLY ASSOCIATED COVER/ CLASSIFICATION CONVENTIONS
M000	**MANUFACTURING AND STORAGE ACTIVITIES**	(land where physical conversion of materials takes place or where materials or liquids are stored, excluding water storage and storage directly associated with agriculture, forestry and extraction activities)	
M100	Electric Energy and Heat Generation	. hydro dams, power houses, diesel, natural gas conversion facilities but not hydro reservoirs (M510) or substations, transmission lines (M160)	Y000 (constructed cover) or Y100 (structures)
M200	Raw Material Processing	. water purification; fibre, metal ore, petroleum, coal, aggregate and chemicals	Y000 (constructed cover) or Y100 (structures) or Y110 (buildings)
M220	Processing Food	. food, wineries	
M280	Processing Wood	. sawmills, pulp and paper mills but not lumber storage areas (M550)	
M290	Other		
M300	Processing Processed Goods	. foods (soup, jams, cereals, soft drinks) . prefabricating (wood, metal, cement) . printing and publishing . but not wholesaling (C100) or parking areas (H110)	Y000 (constructed cover) or Y110 (buildings)
M400	Assembling Products	. clothing, furniture, machinery, household appliance assembly but not wholesaling (C100) or parking areas (H110)	Y000 (constructed cover) or Y110 (buildings)
M500	Storage Activities		
M510	Storing in Reservoirs and Tanks	. water reservoirs, dugouts, fuel tank farms	Z300 (reservoir) or Y100 (structures)
M520	Storing Vehicles, Equipment	. car, aircraft storage, equipment storage but not agriculture (A250) or forest harvesting (FZ10) equipment or retail car lots (C200)	Y200 (constructed surface)
M530	Warehousing	. mini warehouse facilities . storage of packaged or processed goods, but not wholesale distribution centres (C100)	Y110 (buildings)
M550	Open Air Storage	. lumber, coal, concrete product storage; land and water log sorting/storage but not directly associated with forest harvesting sites (FZ10) and not fish net storage (G227)	Y200 (constructed surface) or Y210 (hard surface) or Y220 (unconsol. surface) or Z000 (water)
M590	Other		
M600	Treating/Disposal of Wastes		
M610	Treating/Disposal of Liquid Waste	. sewage treatment plants and lagoons	Y100 (structures) or Z300 (reservoirs)
M630	Treating/Disposal of Solid Waste	. land fills, recycling centers, auto wrecking yards, incinerators	Y200 (constructed surface) or X220 (bare surface) or Y100 (structures)
M690	Other		
M900	Undifferentiated Manufacturing and Storage	. mixed use industrial parks	Y000 (constructed cover)

LAND ACTIVITY CLASSIFICATION (CONT'D)

ACTIVITY CODE		DEFINITION/EXAMPLES	COMMONLY ASSOCIATED COVER/ CLASSIFICATION CONVENTIONS
N000	NO PERCEIVED ACTIVITY	(land on which no activity, either present or past, is evident based upon the data gathering mechanism used, ie: this does not imply no activity is taking place, only that no activity is evident)	
P000	LAND FOR ECOLOGICAL RESEARCH, CONSERVATION FLOOD CONTROL AND DRAINAGE		
P100	Land for Research and Conservation	. ecological but not agricultural (A160) or forestry (F130) research	
P200	Flood Control and Drainage Activities	. diversion channels, drainage canals . pumping stations . dykes	Z200 (canals) Y100 (structures) Y220 (unconsol. surface) or V200 (grass)
Q000	AQUACULTURE		
Q100	Productive Activities		
Q110	Shellfish Production	. oysters, clams, mussels	X200 (bare surface) or Z100 (salt water)
Q120	Saltwater Fish	. salmon	Z100 (salt water)
Q130	Freshwater Fish	. trout, carp ponds	Z300 (ponds)
Q190	Other	. kelp, seaweed	V400 (other non-woody) or Z100 (salt water)
Q200	Site Aquaculture Activities	. equipment, feed sheds	Y110 (buildings)

LAND ACTIVITY CLASSIFICATION (CONT'D)

ACTIVITY CODE		DEFINITION/EXAMPLES	COMMONLY ASSOCIATED COVER/ CLASSIFICATION CONVENTIONS	
R000	RECREATIONAL ACTIVITIES			
R100	Land Dependent Recreational Activities	(activities that primarily depend upon the natural capability of the land)		
R110	Golfing and Associated Activities	. golf course, driving range, equipment areas, clubhouses	V210 (improved grass) or Y110 (buildings)	. use Y000 to indicate that building polygon includes parking activity
R120	Skiing and Associated Activities	. downhill ski runs, lifts and lodges	V220 (grass) or Y100 (structures)	. use Y000 to indicate that building polygon includes parking activity
R130	Trail Using Activities	. snowmobiling, cross country trails, hiking, cycling, horseback riding but not riding stables (R214)	X200 (bare surface) or W100 (trees) or V220 (grass)	. use X200 to reflect dense trail network; otherwise use surrounding vegetation cover
R140	Viewing of Nature, Historical and Archaeological Areas	. look out points, nature trails, historical forts and villages	X200 (bare surface) or Y200 (constructed surface) or Y110 (buildings) or W100 (trees) or V220 (grass)	
R150	Water Related Activities	. beaches, marinas, recreational boating docks but not transportation docks (H140) or commercial fishing wharfs (G227)	Y100 (structures) or X200 (bare surface)	
R160	Recreational Hunting/Fishing	. fishing bars, private hunting areas, lodges but not seasonal, multi-purpose camping areas (R216)	X200 (bare surface) or W220 (shrubs) or Y110 (buildings)	
R170	Recreational Open Space	. city and neighbourhood parks, unofficial recreation use areas	W000 (woody plants) or V200 (grass)	. cover dependent on landscape location
R190	Other			
R200	Indoor and Outdoor Recreational and Cultural Site Activities	(activities that occur primarily on man-made or man-modified sites rather than directly relate to the natural capability of the land)		
R210	Outdoor Recreational/ Cultural Site Activities			
R211	Viewing of Animals	. zoo, game farms	Y000 (constructed cover) or V200 (grass)	
R212	Botanical Gardens, Arboretums		W100 (tall trees) or W200 (shrubs) or V200 (grasses, sedges)	
R213	Public Assembly for Entertainment	. fair grounds, amusement parks, drive-in theatres	Y000 (constructed cover) or Y200 (constructed surface)	. use Y000 to reflect mixed cover of fair grounds but Y200 for drive-in theatres
R214	Sport Activities	. race tracks ..... Y200 (constructed surface) . rifle ranges ..... V200 (grass) . playing fields ..... V210 (improved grass) . equestrian centers ..... Y000 (constructed cover) riding stables or Y110 (buildings)		. distinguish by cover convention
R215	Picnicking		Y200 (constructed surface)	
R216	Camping Sites, Tourist Trailer Parks	. but not fishing and hunting lodges (R160) seasonal cottaging (D120) or mobile home parks (D116)	V200 (grass) or Y200 (surface) or X200 (bare surface) or Y120 (non-building structures)	
R219	Other			
R220	Indoor Recreation/ Cultural Activities	. theatre, auditorium, art gallery, gymnasium, bowling alley, swimming pool but not parking areas (H110)	Y110 (buildings)	

LAND COVER CLASSIFICATION

COVER CODE		DEFINITION/EXAMPLES
V000	**GRASSES AND OTHER NON-WOODY PLANTS**	
V100	Annually Cultivated Crops	. crops planted on land that is annually tilled but not grasses or legumes (V200)
V110	Row Crops	. vegetables, potatoes, corn, flowers and bulbs
V120	Close Grown Crops	. grains (wheat, oats, barley, etc.),forage and oil seed crops but not forage crops (V210)
V190	Other	
V200	Grasses and/or Legumes, Sedges and Reeds	
V210	Improved Grass and/or Legumes	. land on which domesticated grass and/or legume species are planted to provide forage for livestock, to be harvested mechanically and/or grazed by animals directly. . turf or sod, golf courses, lawns, playing fields
V220	Unimproved Grassland, Reeds, Sedges and Forbes	. natural grazing or native forage lands, which may include domesticated grass species but are not cultivated or otherwise improved; . marshes and swamps. (See CLUMP if cover breakdown to forbes, sedges and reeds is desired); . often the dominant cover along pipeline, transmission line or seismic line rights-of-way in otherwise forested areas; . previously cultivated areas that are now abandoned or unused but still dominated by non-woody vegetation
V300	Mosses and/or Lichens	. peat harvested areas; muskeg or lichen-dominated landscapes
V400	Other Non-Woody Plants	. strawberries, asparagus
W000	**WOODY VEGETATION**	
W100	Tall and Mature Trees	. dominant cover of trees 5 metres or greater in height
W110	Regular Spaced (Planted)	
W120	Irregular Spaced	
W200	Small and Immature Trees and Shrubs	. dwarf trees, such as fruit trees (W210) or those dwarfed by adverse climate/soil conditions (W220); ornamental shrubs (W210); blueberries (W212); cranberries (W213); irregularly spaced (natural) immature trees, shrubs and bushes (W220) based on the following height guidelines:
W210	Regular Spaced (Planted)	
W211	Small Trees and Dwarf Trees	. 1.5 - 5.0 metres
W212	Tall Shrubs	. 0.5 - 1.5 metres
W213	Low Shrubs	. less than 0.5 metres
W220	Irregular Spaced	
W221	Small Trees	. 1.5 - 5.0 metres
W222	Tall Shrubs	. 0.5 - 1.5 metres
W223	Low Shrubs	. less than 0.5 metres
W300	Vines	

LAND COVER CLASSIFICATION (CONT'T)

COVER CODE		DEFINITION/EXAMPLES
X000	**DENUDED (BARE) SURFACES**	
X100	Rock Surfaces	
X110	Natural	. bedrock outcrops and cliffs
X120	Man-Made	. rock quarries and open pit mines
X200	Unconsolidated Material Surfaces	. areas denuded of vegetation for whatever purpose but not those areas reconstructed with other unconsolidated material (Y220)
X210	Natural	. sand dunes, natural beaches, talus slopes
X220	Man-Made	. sand and gravel pits, topsoil removal, mine waste tailings ponds, hiking trails
Y000	**CONSTRUCTED COVER**	
Y100	Structures	
Y110	Buildings	. including of wood, metal or concrete
Y120	Other Structures	. mobile homes, dams, wharfs and docks, tanks, open sheds, corrals and paddocks
Y200	Surfaces	. areas where the land surface has been modified by the introduction of material from elsewhere
Y210	Hard Surfaces	. paved roads, parking lots
Y220	Unconsolidated Surfaces	. gravel roads, railway beds, spawning channels, hogfuel, dykes, log and lumber, coal
Z000	**WATER**	
Z100	Salt Water	. ocean, tidal waters
Z200	Streams, Rivers and Canals	. drainage canals
Z300	Ponds, Lakes and Reservoirs	. trout ponds, hydro reservoirs, sewage lagoons
S000	**SNOW AND ICE**	. glaciers, perennial snow patches

REFERENCES

B.C. Assessment Authority. Actual Use Codes and Farm Land Valuation Schedule 27-1.

Capital Improvements Branch, Ontario Ministry of Agriculture and Food. 1983. Agricultural Resource Inventory. Toronto, Ontario.

Gierman, David. M. 1981. Land Use Classification for Land Use Monitoring. Lands Directorate, Environment Canada Working Paper No. 17, Ottawa, Ontario.

Howell-Jones, G.I. 1972. Present Land Use Project (Manual for B.C.). Victoria, B.C.

Kerr, Anne M., E. M. Manning, J. Sequin and L. J. Pelton. 1985. Okanagan Fruitlands: Land Use Change Dynamics and the Impact of Federal Programs, Land Use in Canada Series No. 26. Lands Directorate, Environment Canada, Ottawa, Ontario.

McCellan, V.B., L. Jersak and C.L.A. Hutton. 1967. A Guide to the Classification of Land Use for the Canada Land Inventory. Dept. of Energy, Mines and Resources, Ottawa, Ontario.

Scace, Robert C. 1981. Land Use Classification Systems: An Overview. Lands Directorate Working Paper No. 14, Ottawa, Ontario.

APPENDIX A

SUMMARY: BCLU CORRELATION WITH CLUMP CLASSIFICATION

A000 AGRICULTURE ACTIVITIES

Not included:
- A115 (Tobacco)
- A117 (Corn)
- A260 (Tobacco Curing and Packing)

Added:
- A180 (Specialty Perennial Crops)

Altered:
- A210 (Housing Animals) revised to A210 (Housing Livestock) and A230 (Housing Poultry and Fur Bearing Animals); fourth level activities redefined, as with A220 (Outside Animal Feeding and Holding Areas)
- A250 (Storing/Repairing Agricultural Machinery and Tools) revised to include former A230 (Storing Crops)

B000 UNUSED (IDLE) LAND

- no changes

C000 COMMERCIAL ACTIVITIES

Not included:
- third level activities under C100 (Wholesaling), C200 (Retailing) and C300 (Commercial Services)

D000 DWELLING ACTIVITIES

Not included:
- D121 (Cottaging)
- D211, D212 under D210 (Group Home)

Added:
- D113 (Mobile Homes)
- D230 (Construction Camps)

E000 EXTRACTION ACTIVITIES

Not included:
- E111-E119 under E110 (Extraction of Rock or Consolidated Material
- E121 under E120 (Extraction of Sand, Gravel and Clay)
- E210-E290 under E200 (Underground Extraction)
- fourth level activities under E310 (Pumping), E320 (Transporting/Holding Wastes and Tailings), E330 (Handling of Extracted Material) and E340 (Placer Mining)

Added:
- E400 (Exploration Activities)

APPENDIX A (cont'd)

FOOO FORESTRY ACTIVITIES

Not included:
- F111-F119 under F110 (Logging/Cutting Trees)
- F121, F122 under F120 (Gathering Tree Seed/Raising Seedlings)
- F140 (Tapping of Maple Trees)
- F210-F290 under F200 (Site Forestry Activities)

GOOO WILDLIFE/FISHERIES

Not included:
- G110-G190 under G100 (Productive-Land Wildlife Activities)
- G211-G219 under G210 (Land-Animal Site Activities)
- G221 under G220 (Fishing-Related Site Activities)

Added:
- G225 (Commercial Fishing Facilities)

Altered:
- G224 (Mariculture) moved to new category. See QOOO (Aquaculture)

HOOO TRANSPORTATION AND COMMUNICATION ACTIVITIES

Not included:
- fourth level activities (eg: H111, H121, H131) under H100 (Transporting Activites
- H210-H290 under H200 (Communicating Activities)

JOOO INSTITUTIONAL SERVICES

Not included:
- J500 plus third level activities (eg: J110, J210) under J100 (Legislative) J200 (Protective) J300 (Educational) J400 (Medical)

LOOO LAND IN TRANSITION

- no changes

MOOO MANUFACTURING AND STORING ACTIVITIES

Not included:
- third level activities (eg: M110, M310, M410) under M100 (Electric Energy and Heat Generation), M300 (Processing Processed Goods) M400 (Assembling)
- M210, M230-M270 under M200 (Raw Material Processing)
- M511-M519, M521-M529, M540 under M500 (Storage Activities)
- fourth level activities (eg: M611, M631) plus M620 and M640 under M600 (Treating and Disposal of Wastes)

APPENDIX A (cont'd)

N000 NO PERCEIVED ACTIVITY

. no changes

P000 LAND FOR ECOLOGICAL RESEARCH, CONSERVATION, FLOOD CONTROL AND DRAINGES

. no changes

Q000 AQUACULTURE

Added:
. Q000 (Aquaculture), including Q100 (Productive), Q110 (Shellfish), Q120 (Saltwater Fish), Q130 (Freshwater Fish) and Q200 (Site Aquaculture Activities)

R000 RECREATIONAL ACTIVITIES

Not included:
. fourth level activities (eg: R111, R121, R131) under R100 (Land Dependent Recreational Activities)
. R221-R229 under R220 (Indoor Recreational and Cultural Activities)

APPENDIX B

SUMMARY: BCLU CORRELATION WITH CLI PLU CLASSIFICATION

CLI PLU Class	BCLU Activity and/or Cover Correlation	
A Cropland	A111 (growing grain) A114 (growing seed crops)	
B Built-up Area	Y000 (constructed cover) C000 (commercial) D000 (dwellings) H110, H120, H130 (transporting by road, rail, air) J000 (institutional) M000 (manufacturing)	
E Mines, Quarries, Sand, Gravel Pits	E110, E120 (extraction of rock, sand, gravel, clay) E300 (extraction site activities)	
G Orchards and Vineyards	A131 (tree fruit production) A132 (grape production) A135 (nut production) H160 (holly production)	
H Horticulture, Poultry and Fur Operations	A112 (growing vegetables) A113 (growing root crops and tubers) A116 (growing flowers and bulbs) A133 (berry production) A140 (growing ornamental shrubs and trees) A150 (sod production) A170 (hop production) A230 (housing poultry, game birds and fur bearing animals) A240 (growing plants in greenhouses) A270 (mushroom growing) A280 (beekeeping and honey making)	
K Rough Grazing and Rangeland	A122/V220 (grazing) V220 (unimproved grass)	. primarily a cover type, therefore, could include a number of activities, such as G100 (productive wildlife) H150, H160 (transporting by pipeline, electricity)
L Rock and Other Unvegetated Surface	X000 (bare surface)	. cover type; does not include E000 (extraction)

cont'd...

APPENDIX B (cont'd)

CLI PLU Class	BCLU Activity and/or Cover Correlation	
M Swamp, Marsh, Bog	V220 (unimpoved grass, reeds sedges, forbes) W220 (small trees and shrubs) N000 (no perceived activity)	. primarily a cover type, therefore, could include a number of activities, such as G100 (productive wildlife) P100 (ecological research, conservation)
O Outdoor Recreation	R100 (land dependent recreation) R210 (outdoor recreation and cultural site activities) D120 (seasonal housekeeping)	
P Improved Pasture and Forage Crops	A121 (growing forage crops) A122/V210 (grazing) A210 (housing livestock) A220 (outside animal feeding)	. mainly a cover type except for specific livestock site activities
S Sand Flats, Dunes and Beaches	X200 (bare surface, unconsolidated)	
T[1] Productive Woodland (Mature)	W100 (tall trees) F170 (forest management) F200 (site forestry activities)	. primarily a cover type
T[2] Productive Woodland (Immature)	W200 (immature trees) F170 (forest management)	. primarily a cover type
U[1] Unproductive Forest (Productive Site)	W200 (shrubs) N000 (no perceived activity)	. primarily a cover type
U[2] Unproductive Forest (Unproductive Site)	W200 (shrubs) N000 (no perceived activity)	. primarily a cover type
X Water	Z000 (water)	

BCLU CLASSIFICATION

LAND ACTIVITY

A000 AGRICULTURAL ACTIVITIES

A100 Productive-Land Agricultural Activities
- A110 Growing Annual Tillage Crops
  - A111 Growing Grain
  - A112 Growing Vegetables
  - A113 Growing Root Crops and Tubers
  - A114 Growing Seed Crops
  - A116 Growing Flowers and Bulbs
  - A119 Other
- A120 Growing Forage Crops and Grazing
  - A121 Growing Forage Crops
  - A122 Grazing
- A130 Fruit, Berry and Nut Production
  - A131 Tree Fruit Production
  - A132 Grape Production
  - A133 Berry Production
  - A134 Tree Fruit or Grape Nursery Stock Production
  - A135 Nut Production
- A140 Growing Ornamental Shrubs and Trees
- A150 Sod Production
- A160 Agricultural Research
- A170 Hop Production
- A180 Specialty Perennial Crops
- A190 Other

A200 Site Agricultural Activities
- A210 Housing Livestock
  - A211 Housing dairy animals
  - A212 Housing beef animals
  - A213 Housing horses
  - A214 Housing swine
  - A215 Housing sheep
  - A219 Other
- A220 Outside Animal Feeding and Holding Areas
  - A221 Dairy
  - A222 Beef
  - A223 Horse
  - A225 Sheep
  - A229 Other
- A230 Housing Poultry, Game Birds and Fur Bearing Animals
  - A231 Housing Poultry
  - A232 Housing Game Birds
  - A233 Housing Fur Bearing Animals
- A240 Growing Plants in Greenhouses
  - A241 Growing Vegetables
  - A242 Growing Flowers & Ornamentals
  - A249 Other
- A250 Storing Crops and Storing/Repairing Agricultural Machinery and Tools
  - A251 Storing Crops
  - A252 Storing and Repairing Agricultural Machinery and Tools
- A270 Mushroom Growing
- A280 Beekeeping and Honey Making
- A290 Other

B000 UNUSED (IDLE) LAND

B100 Former Agricultural Activities

B200 Former Forestry Activities

B300 Former Extraction Activities

B400 Former Recreational Activities

B500 Former Dwelling Activities

B600 Former Transport., Communic. Activities

B700 Former Mfg., Storage Activities

B800 Former Commercial Activities

B900 Former Institutional Services

C000 COMMERCIAL ACTIVITIES

C100 Wholesaling

C200 Retailing

C300 Providing Commercial Services

D000 DWELLING ACTIVITIES

D100 Housekeeping Activities
- D110 Permanent Dwellings
  - D111 Single Family Dwelling
  - D112 Multiple Dwellings
  - D113 Mobile Homes
  - D119 Other
- D120 Seasonal/Temporary Housekeeping

D200 Other Dwelling Activity
- D210 Group Homes
- D220 Hotels, Motels
- D230 Construction Camps
- D290 Other

E000 EXTRACTION ACTIVITIES

E100 Surface Extraction
- E110 Extraction of Rock, Consol. Material
- E120 Extraction of Sand, Gravel and Clay
- E130 Peat Extraction
- E140 Top Soil Removal
- E190 Other

E200 Underground Extraction

E300 Extraction Site Activities
- E310 Pumping
- E320 Transport/Holding Wastes and Tailings
- E330 Handling Extracted Material
- E340 Placer Mining
- E350 Extraction Activity Camp Facilities
- E390 Other

E400 Exploration Activities

F000 FORESTRY ACTIVITIES

F100 Productive Land Forestry Activities
- F110 Logging/Cutting Trees
- F120 Gathering Tree Seed/Raising Seedlings
- F130 Forestry Research
- F150 Growing Christmas Trees
- F160 Holly Production
- F170 Forest Management Activities
- F190 Other

F200 Site Forestry Activities

G000 WILDLIFE AND FISHERIES RELATED ACTIVITIES

G100 Productive-Land Wildlife Activities

G200 Wildlife,Fisheries Related Site Activities
- G210 Land-Animal Site Activities
- G220 Fishing Site Activities
  - G222 Raising Fish for Transplant
  - G223 Aiding Fish Migration
  - G225 Commercial Fishing Facilities
  - G229 Other

H000 TRANSPORTATION AND COMMUNICATION ACTIVITIES

H100 Transporting Activities
- H110 Transporting by Roads
- H120 Transporting by Rail
- H130 Transporting by Air
- H140 Transporting by Water
- H150 Transporting by Pipeline
- H160 Transporting by Electricity
- H190 Other

H200 Communicating Activity

LAND ACTIVITY (CONT'D)

J000 PROVIDING INSTITUTIONAL SERVICES

J100 Legislative, Judicial and Legal Services

J200 Protective and Custodial

J300 Educational Services

J400 Health, Medical, Care Facilities

J600 Religious, Associated Activities
- J610 Worshipping
- J620 Burying

J700 Assembly Activities

J900 Undifferentiated Institutional Services

L000 LAND IN TRANSITION

M000 MANUFACTURING, STORAGE ACTIVITIES

M100 Electric Energy, Heat Generation

M200 Raw Material Processing
- M220 Processing Food
- M280 Processing Wood
- M290 Other

M300 Processing Processed Goods

M400 Assembling Products

M500 Storage Activities
- M510 Storing in Reservoirs, Tanks
- M520 Storing Vehicles, Equipment
- M530 Warehousing
- M550 Open Air Storage
- M590 Other

M600 Treating/Disposal of Wastes
- M610 Treating/Disposal of Liquid Waste
- M630 Treating/Disposal of Solid Waste
- M690 Other

M900 Undifferentiated Mfg., Storage

N000 NO PERCEIVED ACTIVITY

P000 LAND FOR ECOLOGICAL RESEARCH, CONSERV. FLOOD CONTROL AND DRAINAGE

P100 Land for Research and Conservation

P200 Flood Control and Drainage Activities

Q000 AQUACULTURE

Q100 Productive Activities
- Q110 Shellfish Production
- Q120 Saltwater Fish
- Q130 Freshwater Fish
- Q190 Other

Q200 Site Aquaculture Activities

R000 RECREATIONAL ACTIVITIES

R100 Land Dependent Recreational Activities
- R110 Golfing, Associated Activities
- R120 Skiing and Associated Activities
- R130 Trail Using Activities
- R140 Viewing of Nature, Historical and Archaeological Areas
- R150 Water Related Activities
- R160 Recreational Hunting/Fishing
- R170 Recreational Open Space
- R190 Other

R000 RECREATIONAL ACTIVITIES (cont'd)

R200 Indoor and Outdoor Recreational and Cultural Site Activities
- R210 Outdoor Rec./Cultural Site Activities
  - R211 Viewing of Animals
  - R212 Botanical Gardens, Arboretums
  - R213 Public Assembly for Entertainment
  - R214 Sport Activities
  - R215 Picnicking
  - R216 Camping Sites, Tourist Trailer Parks
  - R219 Other
- R220 Indoor Recreation/Cultural Activities

LAND COVER

V000 GRASSES AND OTHER NON-WOODY PLANTS

V100 Annually Cultivated Crops
- V110 Row Crops
- V120 Close Grown Crops
- V190 Other

V200 Grasses, Legumes, Reeds, Sedges, Forbes
- V210 Improved Grass and/or Legumes
- V220 Unimproved Grassland, Reeds, Sedges, Forbes

V300 Mosses and/or Lichens

V400 Other Non-Woody Plants

W000 WOODY VEGETATION

W100 Tall and Mature Trees
- W110 Regular Spaced (Planted)
- W120 Irregular Spaced

W200 Small and Immature Trees and Shrubs
- W210 Regular Spaced (Planted)
  - W211 Small Trees and Dwarf Trees
  - W212 Tall Shrubs
  - W213 Low Shrubs
- W220 Irregular Spaced
  - W221 Small Trees
  - W222 Tall Shrubs
  - W223 Low Shrubs

W300 Vines

X000 DENUDED (BARE) SURFACES

X100 Rock Surfaces
- X110 Natural
- X120 Man-Made

X200 Unconsolidated Material Surfaces
- X210 Natural
- X220 Man-Made

Y000 CONSTRUCTED COVER

Y100 Structures
- Y110 Buildings
- Y120 Other Structures

Y200 Surfaces
- Y210 Hard Surfaces
- Y220 Unconsolidated Surfaces

Z000 WATER

Z100 Salt Water

Z200 Streams, Rivers and Canals

Z300 Ponds, Lakes and Reservoirs

S000 SNOW AND ICE